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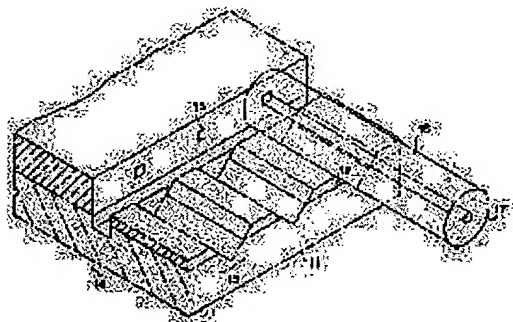
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### (54) PLANE WAVEGUIDE PARTS WITH OPTICAL FIBER AND THEIR PRODUCTION

(57)Abstract:

PURPOSE: To provide the plane waveguide parts with optical fibers which are compact and inexpensive.

CONSTITUTION: V-groove parts 13 are directly formed by using marks formed on an under clad layer 12 of a plane waveguide circuit as working marks on the plane waveguide chip of the plane waveguide parts with optical fibers packaged with connecting optical fibers 16 on the plane waveguide end face. A perpendicular groove 14 for working the end face part of waveguide core parts 15 to the plane perpendicular to the substrate plane of a waveguide substrate 11 is produced in the form of crossing the V-groove parts 13. The waveguide core parts 15 of the plane waveguide chip and the core parts 17 of the optical fibers are butted against each other and are fixed and connected. The V-groove parts 13 may be formed at a sharp angle with the flanks of the waveguide core parts 15. A top cap with a spacer to cover the V-groove parts 13 may be formed in contact with the end faces of the waveguide core parts 15.



### LEGAL STATUS

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